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(72) Inventors; and

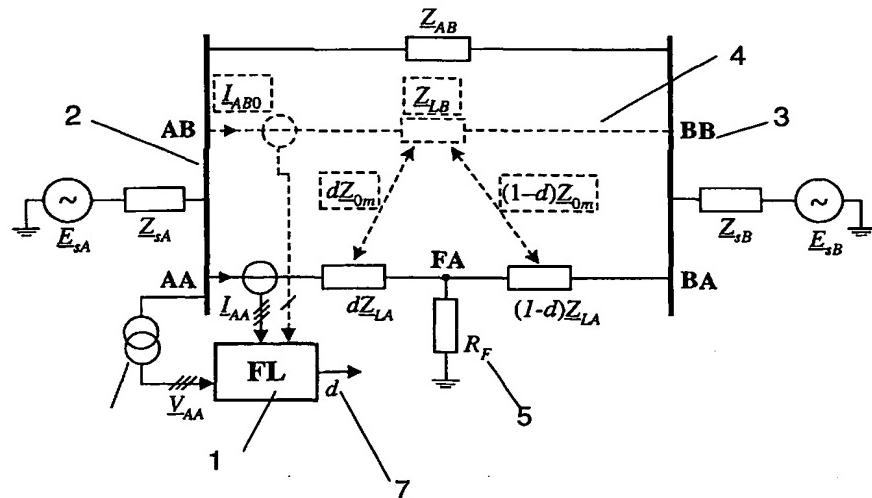
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— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FAULT LOCATION USING MEASUREMENTS OF CURRENT AND VOLTAGE FROM ONE END OF A LINE



(57) Abstract: A method to locate a fault from one end of a section of a power line (A-B). Measurements of current, voltage and angles between the phases are made at a first A end of a said power line section. Upon detection of a fault condition between said first end and a second end of said power line, distance to the fault is found by calculating symmetrical components of currents for said current and voltage measure at said first end, then calculating a distance d from said first end 2 to the fault F the distance d to the fault using a quadratic equation. A value for source impedance at the first and/or second end used in the method may be a representative value or a measured value. The invention may be applied to a single line or parallel lines. In other aspects of the invention a fault locator device for carrying out the method and a computer program for carrying out the method are described.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 03/01091

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G01R 31/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G01R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4559491 A (M.M.SAHA), 17 December 1985 (17.12.85), column 9, line 31 - line 56; column 4, line 25 - line 32, abstract	1,27
Y		18
A	--	1-32
Y	EP 0358488 A3 (GEC ALSTHOM LTD.), 14 March 1990 (14.03.90), page 4, line 58 - line 61	18
A	--	1-32
A	US 4107778 A (Y.NII ET AL), 15 August 1978 (15.08.78), claim 23	1-32
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 Further documents are listed in the continuation of Box C. See patent family annex.

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- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>DATABASE WPI WEEK 198127 000PP Derwent Publications Ltd., London, GB SU 761953 B 19800907 (MALY-I) MALYIAS Abstract</p> <p>---</p> <p>-----</p>	1-32

INTERNATIONAL SEARCH REPORT

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